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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,030	01/17/2001	Jose Villena	CellIT-008XX	8067

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EXAMINER	
CHOUDHURY, AZIZUL Q	

ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/764,030	VILLENA, JOSE	
	Examiner	Art Unit	
	Azizul Choudhury	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

This office action is in response to the correspondence received on August 23, 2004.

Claim Rejections - 35 USC § 103

Claims 1-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kasi et al (US Pat No: US006256641B1), hereafter referred to as Kasi.

1. With regards to claim 1, Kasi teaches a system for processing transactions, each transaction requiring one or more database accesses, the system comprising plural client applications, plural transaction switches, and plural transaction engines, wherein client applications requiring transactions are configured to send a request for such transaction to a selected one of said transaction switches, wherein said selected transaction switch is configured to send said transaction to a selected transaction engine to perform said one or more database accesses, and wherein said transaction switch selects said transaction engine in a manner that attempts to balance loading across said transaction engines in a predetermined manner
(The design claimed is essentially is a three-tier system for databases. Kasi teaches a design for a three-tier system for databases (column 3, lines 14-18, Kasi). In a three-tier design, client machines make database requests to a middleware (column 3, line 35, Kasi), which performs the request operations on the databases as needed. The engines claimed are middleware and is performed by servers within Kasi's design

(column 3, lines 14-33, Kasi). In addition, Kasi's design is able to be used within a large network (column 4, line 21, Kasi). Since a client makes a request to a server (engine) within a large network, it is inherent that switches are used as claimed and that the switches will transfer the request from the client to the server (engine). The server (engine) then functions as claimed to retrieve the data from the appropriate databases (column 5, lines 24-35, Kasi). In addition, load balancing is practiced within Kasi's design (column 4, lines 47-53, Kasi). In the load balancing of Kasi's design, the servers (engines) are selected in a manner to balance loading as claimed. This load balancing is attached to the network's communication infrastructure in Kasi's design (Figure 1, Kasi). The load balancing is hence a part of the communication infrastructure and computerized switches are inherently present in communication infrastructures. Since computerized switches inherently must be present within such a design, and the load balancing services are attached to the communication infrastructure, means for the claimed switch being configured to send transactions to a selected transaction engine in a manner that attempts to balance loading are present within Kasi's design).

2. With regards to claim 2, Kasi teaches a system wherein said transaction switch is configured to determine how many database accesses are required, and to utilize such determination, at least in part, to assign said transaction to a transaction engine (Kasi states that the load balancing in the design has a number of methods to yield balanced loads. Kasi goes on to state that the load balancing is performed to avoid overloading any servers (engines) (column 4, line 51, Kasi). To achieve this, it is inherent that

means by which to determine how many database accesses are required are present within Kasi's design).

3. With regards to claim 3, Kasi teaches a system wherein said transaction switch is configured to determine a priority of said transaction, and to utilize said priority, at least in part, to assign said transaction to a transaction engine (Kasi states that the load balancing in the design has a number of methods to yield balanced loads. Kasi goes on to state that the load balancing is performed to avoid overloading any servers (engines) (column 4, line 51, Kasi). To achieve this, it is inherent that means by which to determine a priority of transactions as claimed are present within Kasi's design).

4. With regards to claim 4, Kasi teaches a system wherein said transaction switch is configured to determine bandwidth utilization of a communications link to a database, and to utilize said bandwidth utilization, at least in part, to assign said transaction to a transaction engine (Kasi states that the load balancing in the design has a number of methods to yield balanced loads. Kasi goes on to state that the load balancing is performed to avoid overloading any servers (engines) (column 4, line 51, Kasi). To achieve this, it is inherent that means by which to determine bandwidth utilization are present within Kasi's design).

5. With regards to claim 5, Kasi teaches a system wherein said transaction switch utilizes at least two of bandwidth utilization to a database, priority, and number of

database accesses required in order to assign the transaction to a transaction engine (Kasi states that the load balancing in the design has a number of methods to yield balanced loads. Kasi goes on to state that the load balancing is performed to avoid overloading any servers (engines) (column 4, line 51, Kasi). In addition, Kasi's design has multiple databases, clients and servers (engines) (column 3, lines 14-17, Kasi). Furthermore, Kasi's design has multiple connection routes (Figure 6, Kasi). To achieve this, it is inherent that means by which to determine bandwidth utilization are present within Kasi's design).

6. With regards to claim 6, Kasi teaches a system wherein each client application comprises software for selecting which transaction switch should be utilized to assign the transaction to a transaction engine (Kasi's design has applications within each client (column 3, lines 15-16, Kasi). In addition, it is inherent that such applications are used for the client to select a switch with which to submit a request with).

7. With regards to claim 7, Kasi teaches a system connected to a contact center to process incoming or outgoing contacts (It is inherent that a contact center would be present in such a design. In addition, Kasi's design has requests and replies handled (Figure 2, Kasi). For such processes to occur, contact centers must exist).

8. With regards to claim 8, Kasi teaches a method of processing contacts at a contact center comprising the steps of: establishing a communication session between

a client application to process a transaction for said contact and a transaction switch; determining a loading factor associated with said transaction based upon said loading factor, assigning said transaction to one of plural transaction engines to perform multiple database accesses in furtherance of said transaction, wherein said transaction switches do not communicate directly with said database, but said transaction engines do (It is inherent that a contact center would be present in such a design. In addition, Kasi's design has requests and replies handled (Figure 2, Kasi). For such processes to occur, contact centers must exist. Furthermore, Kasi's design is able to be used within a large network (column 4, line 21, Kasi). Since a client makes a request to a server (engine) within a large network, it is inherent that switches are used as claimed and that the switches will transfer the request from the client to the server (engine). The server (engine) then functions as claimed to retrieve the data from the appropriate databases (column 5, lines 24-35, Kasi). Plus, load balancing is practiced within Kasi's design (column 4, lines 47-53, Kasi). In the load balancing of Kasi's design, the servers (engines) are selected in a manner to balance loading as claimed. This load balancing is attached to the network's communication infrastructure in Kasi's design (Figure 1, Kasi). The load balancing is hence a part of the communication infrastructure and computerized switches are inherently present in communication infrastructures. Since computerized switches inherently must be present within such a design, and the load balancing services are attached to the communication infrastructure, means for the claimed transaction switch determining a loading factor are present within Kasi's design)).

9. With regards to claim 9, Kasi teaches a method further comprising the step of broadcasting a value indicative of the present loading of each transaction engine to the transaction switches (Kasi states that the load balancing in the design has a number of methods to yield balanced loads. Kasi goes on to state that the load balancing is performed to avoid overloading any servers (engines) (column 4, line 51, Kasi). To achieve this, it is inherent that means by which to broadcast loading information on each server (engine) to the switches are present within Kasi's design).

10. With regards to claim 10, Kasi teaches a method wherein said each of said communication sessions is associated with a backup link to facilitate communications in the event of a failure (Kasi's design has multiple connection routes (Figure 6, Kasi)).

11. With regards to claim 11, Kasi teaches a method wherein said assigning comprises assigning both a primary and a backup transaction engine (Kasi's design has multiple connection routes, this includes a choice between servers (engines) should one be unable to serve (Figure 6, Kasi)).

12. With regards to claim 12, Kasi teaches a method wherein the assigning is accomplished in a round robin fashion (Round robin is one of the methods applicable in Kasi's load balancing (column 4, line 53, Kasi)).

13. With regards to claim 13, Kasi teaches an apparatus for processing multiple transactions, some of which require multiple accesses to databases, said apparatus comprising plural transaction engines for directly accessing the databases to perform said required multiple accesses, and a switching system for determining loading introduced by each transaction on a transaction engine to process said transaction, and for assigning said transactions in a manner based upon said loading (The design claimed is essentially is a three-tier system for databases. Kasi teaches a design for a three-tier system for databases (column 3, lines 14-18, Kasi). In a three-tier design, client machines make database requests to a middleware (column 3, line 35, Kasi), which performs the request operations on the databases as needed. The engines claimed are middleware and is performed by servers within Kasi's design (column 3, lines 14-33, Kasi). In addition, Kasi's design is able to be used within a large network (column 4, line 21, Kasi). Since a client makes a request to a server (engine) within a large network, it is inherent that switches are used as claimed and that the switches will transfer the request from the client to the server (engine). The server (engine) then functions as claimed to retrieve the data from the appropriate databases (column 5, lines 24-35, Kasi). In addition, load balancing is practiced within Kasi's design (column 4, lines 47-53, Kasi). In the load balancing of Kasi's design, the servers (engines) are selected in a manner to balance loading as claimed. This load balancing is attached to the network's communication infrastructure in Kasi's design (Figure 1, Kasi). The load balancing is hence a part of the communication infrastructure and computerized switches are inherently present in communication infrastructures. Since computerized

switches inherently must be present within such a design, and the load balancing services are attached to the communication infrastructure, means for the claimed switch being configured to send transactions to a selected transaction engine in a manner that attempts to balance loading are present within Kasi's design).

14. With regards to claim 14, Kasi teaches an apparatus wherein said switching system is configured to attempt to balance the loading across multiple transaction engines in accordance with a predetermined criteria (Kasi states that the load balancing in the design has a number of methods to yield balanced loads. Kasi goes on to state that the load balancing is performed to avoid overloading any servers (engines) (column 4, line 51, Kasi). To achieve this, it is inherent that means by which to determine a priority of transactions as claimed are present within Kasi's design).

15. With regards to claim 15, Kasi teaches an apparatus wherein said predetermined criteria includes priority of transactions being processed (Kasi states that the load balancing in the design has a number of methods to yield balanced loads. Kasi goes on to state that the load balancing is performed to avoid overloading any servers (engines) (column 4, line 51, Kasi). To achieve this, it is inherent that means by which to determine how many transactions are required are present within Kasi's design).

16. With regards to claim 16, Kasi teaches an apparatus wherein said predetermined criteria includes volume of data to be entered or read out from a database (Kasi states

that the load balancing in the design has a number of methods to yield balanced loads. Kasi goes on to state that the load balancing is performed to avoid overloading any servers (engines) (column 4, line 51, Kasi). To achieve this, it is inherent that means by which to determine volume are present within Kasi's design).

17. With regards to claim 17, Kasi teaches an apparatus wherein each transaction engine is resident on a different computer (The transaction engine of Kasi's design is resident within a server (column 3, lines 14-32, Kasi)).

18. With regards to claim 18, Kasi teaches an apparatus wherein the transaction engines communicate with each other via a local area network (Kasi's design is able to be used within a large network (column 4, line 21, Kasi). In addition, figures show that the devices are located within LANs as claimed (Figure 6, Kasi). Hence, networks are used in Kasi's design).

19. With regards to claim 19, Kasi teaches an apparatus wherein all communications between a transaction switch and a transaction engine are performed via backup up communications links (Kasi's design has multiple connection routes (Figure 6, Kasi)).

20. With regards to claim 20, Kasi teaches an apparatus wherein at least one database has a synchronized backup and an archive backup that is not synchronized (Kasi's design allows for database recovery (column 4, lines 39-47, Kasi)).

Response to Remarks

The remarks received on August 23, 2004 have been carefully reviewed but are not deemed fully persuasive. The principle argument presented is that the claimed invention features "transaction switches" (that are computers) that provide load balancing by selecting the service engine to send the request to for processing. The Kasi prior art presented features a "load balancing service" attached to the communications infrastructure (Figure 1, Kasi). The "load balancing service" is able to be a hardware or software. The communication infrastructure comprises the infrastructure required to transmit data within the network. For networks with servers and clients (such as Kasi's), it is inherent that switches are part of the communication infrastructure. Switches can be made from many different forms of computers. Since the "load balancing service" can be hardware or software, it can exist within or alongside with the switches of Kasi's design. The switches are required for sending the data towards the proper recipients (in the Kasi art, they would be used to send the request properly to the correct server). Since, the load balancing service is part of the communication infrastructure, and switches must exist in such a network and are able to contain the load balancing service, and switches are responsible for sending data to their destination, the examiner stands with the argument that the switches of Kasi's design must use the load balancing service to send data to the proper server.

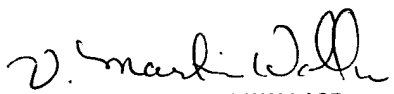
Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Azizul Choudhury whose telephone number is (571) 272-3909. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on (571) 272-6159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



VALENCIA MARTIN-WALLACE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

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AC